UCAR International Outreach Activities: Remote Sensing

Timothy C. Spangler, Ph.D.
Director

A Philosophy

- Provide Information
  - What is coming?
  - What can the sensors do?
  - How will I get the data?

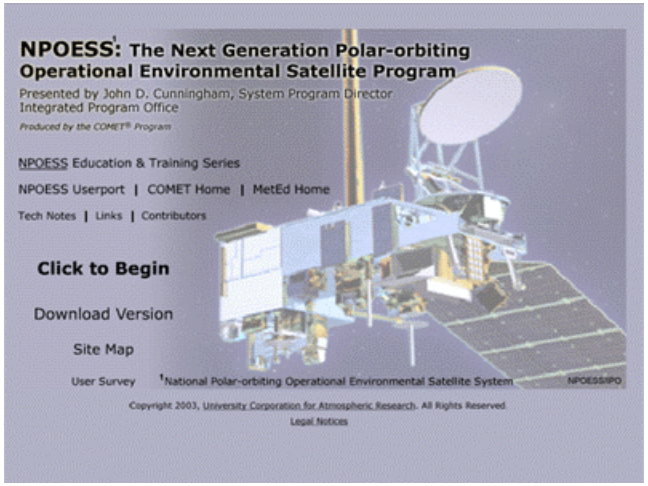
Weather forecasters are not as interested in the engineering decisions as they are in the utility of what is coming

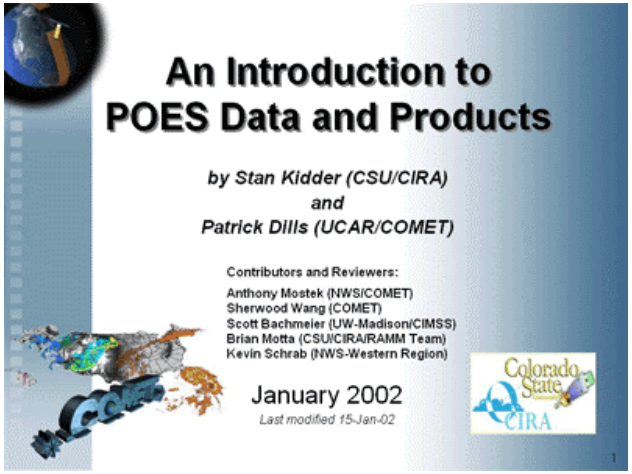
- Demonstrate the utility and use of data
  - Detection of specific features (dust, fog, fires, etc.)
  - Advantages and improvements over today
  - Limitations
- Demonstrate the application of the data in weather forecasting
  - Model Initialization (water vapor, jet steaks, mountain waves)
  - Surface features (fog)
  - Situational Awareness (dry lines)
  - Disasters (fires, volcanic ash)

Dissemination and Training

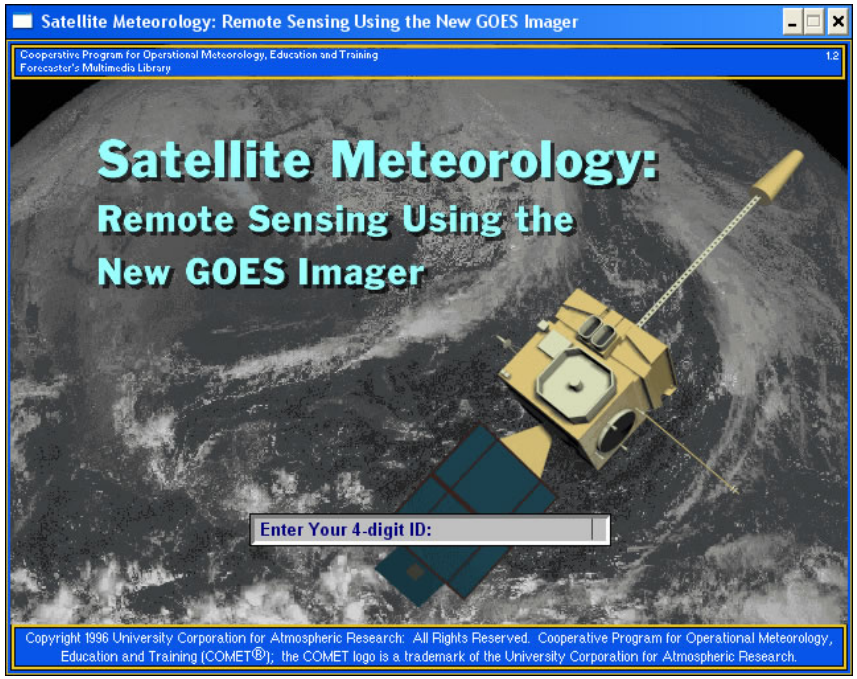
- International organizations can't always handle bandwidth
- Training centers can stimulate use of new satellite data
- Training is needed in multiple languages
- Training is needed with regional applications

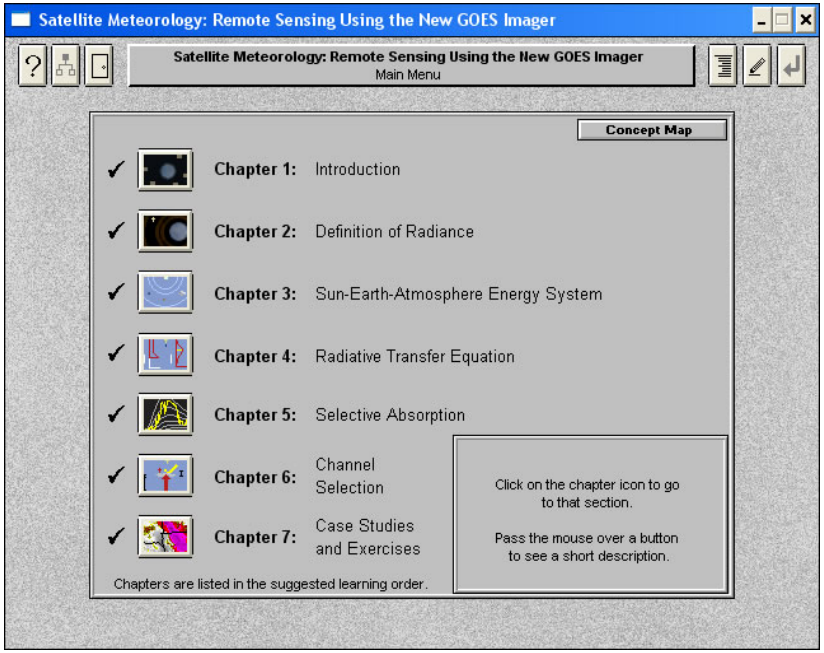
Information



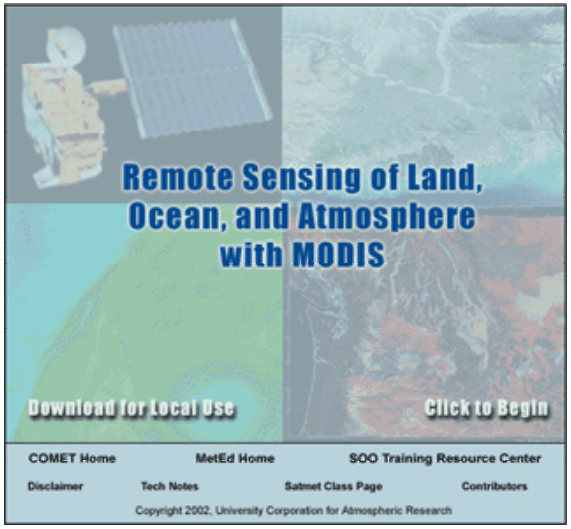


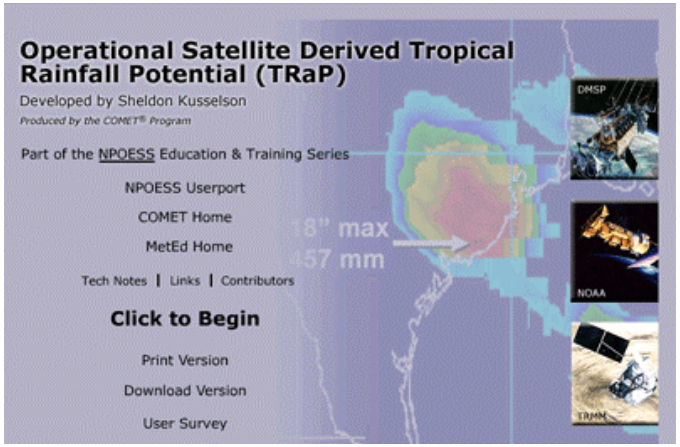
Information



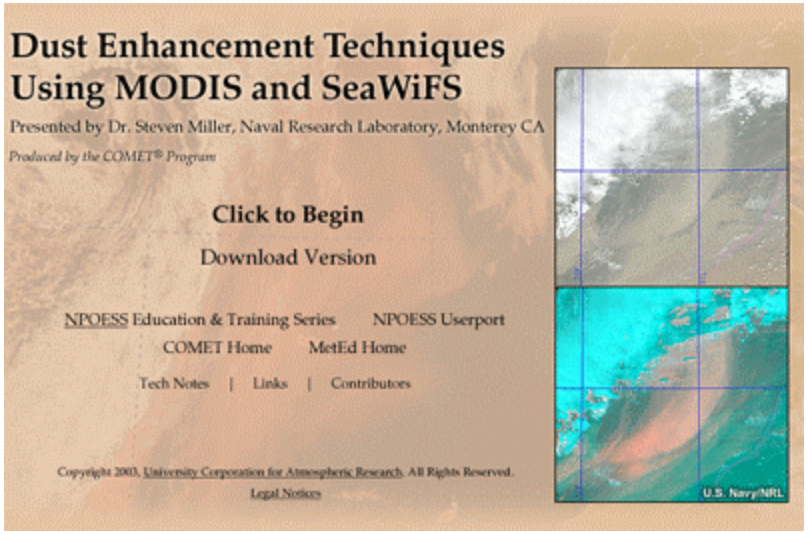


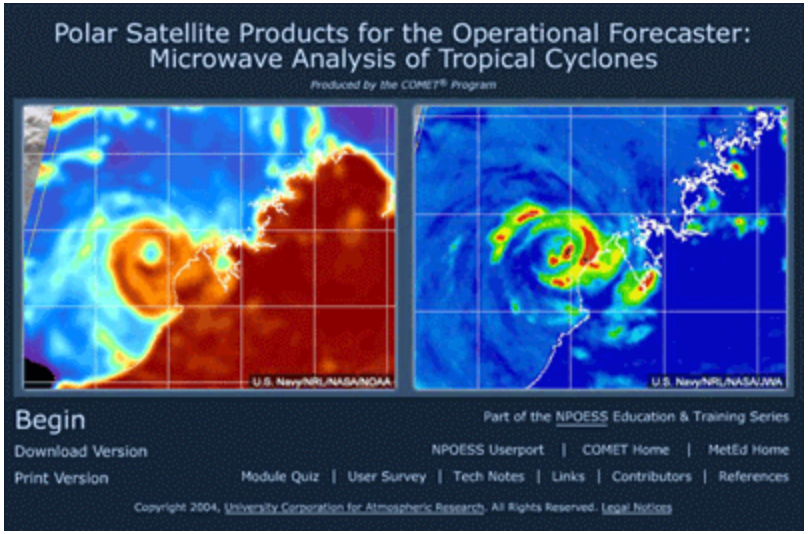
Demonstration



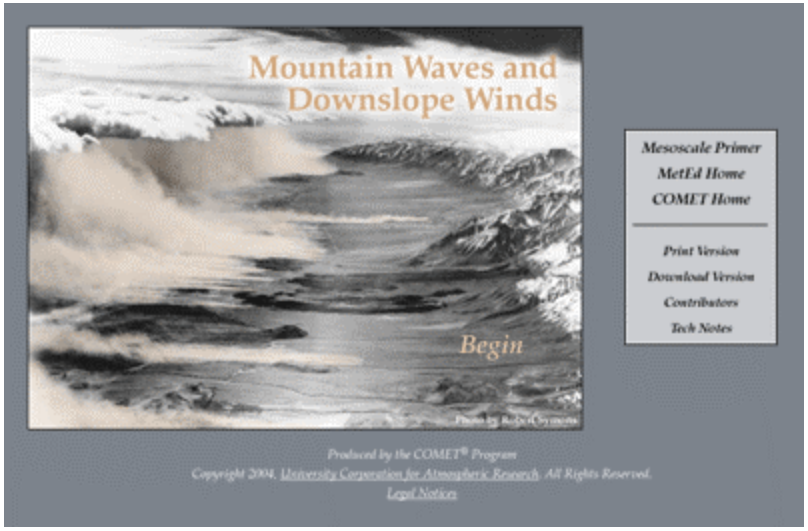


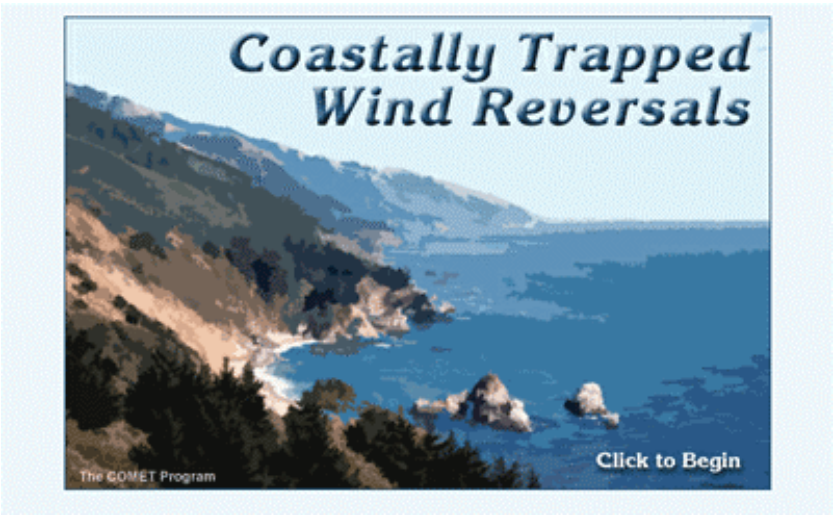
Demonstration



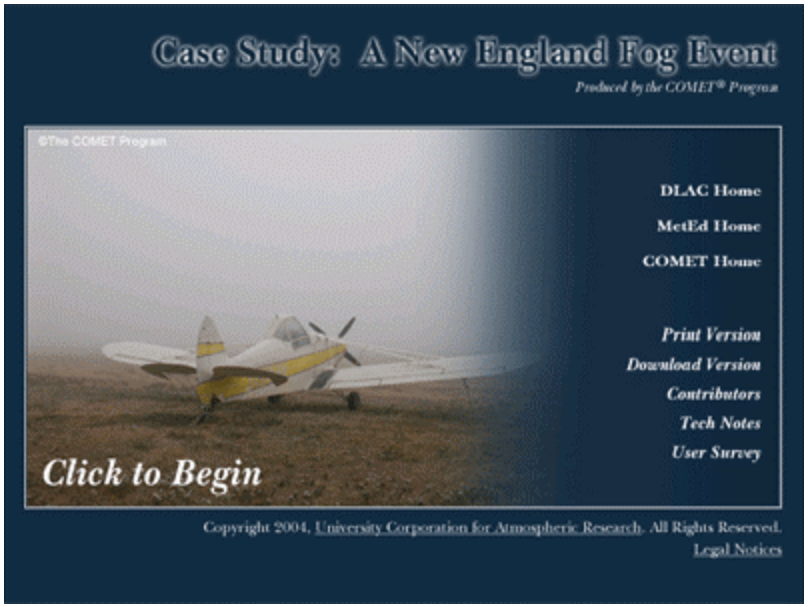


Application





Application



MeteoForum: A Pilot Project

- Developed jointly by two UCAR Programs
  - COMET
  - Unidata
- Collaboration with WMO Region III & IV Regional Meteorological Training Centers (RMTCs)
- Funded by UCAR Office of Program (UOP) and COMET Director's opportunity funds, and NWS office of International Affairs

MeteoForum RMTC Participants

Universidade Federal do Pará

Universidad de Buenos Aires

Universidad de Costa Rica

Caribbean Institute for Meteorology and Hydrology

Universidad Central de Venezuela

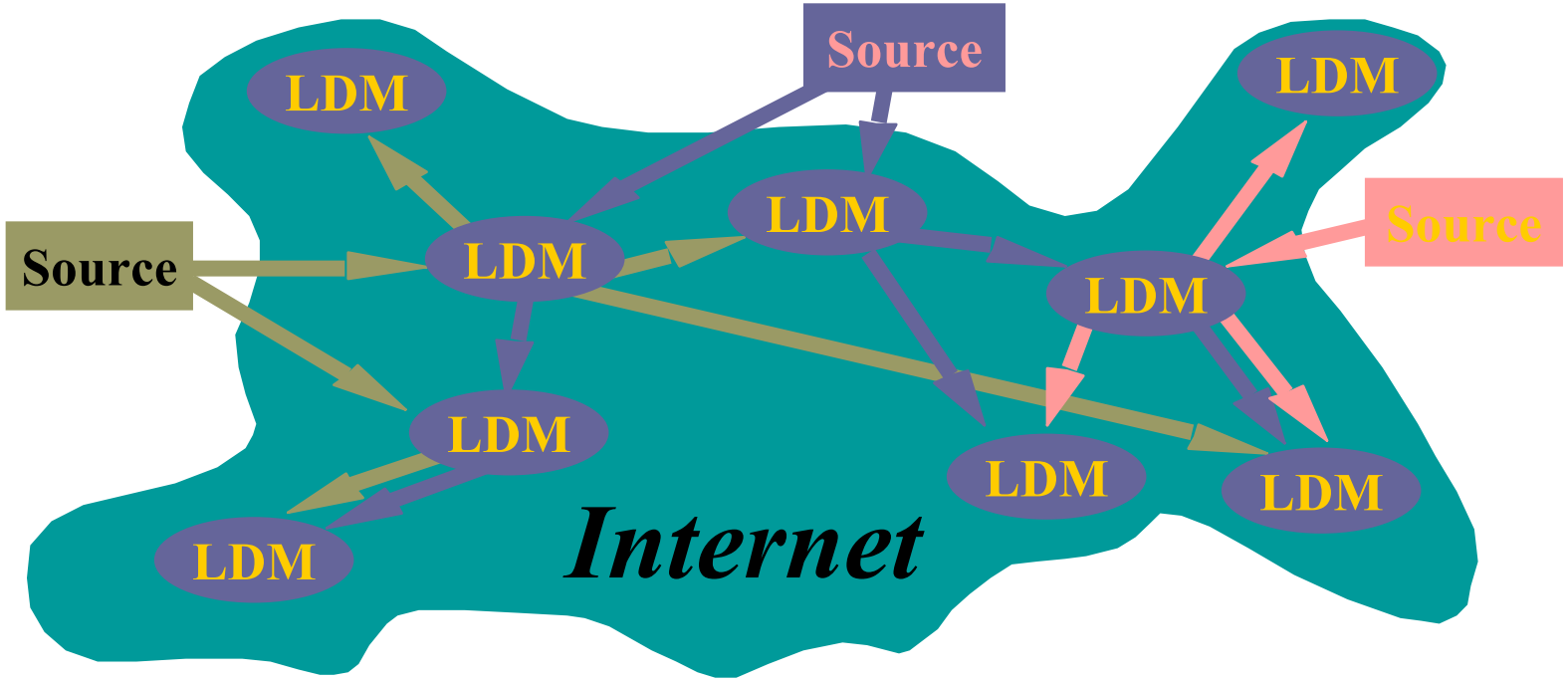
MeteoForum Concept

Use the Internet to strengthen RMTCs by:

- Enabling free access to:
  - Rich data resources
    - Real-time flows of observations & model outputs
    - Case-studies with comprehensive data sets
    - Remotely-sensed data including satellite imagery
    - Climate records...
  - Software for data display & analysis
  - Training & reference materials, on Web or CD
- Promoting coordination among RMTCs, universities, and national meteorological services

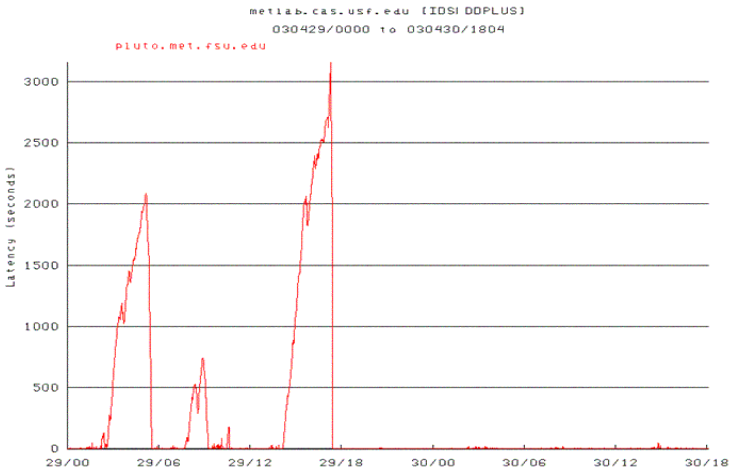
Dissemination & Training

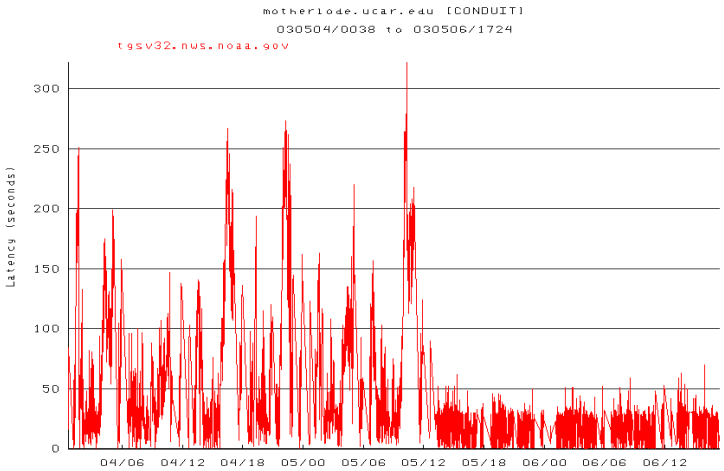
Internet Data Distribution



Using LDM software for relaying data, some 160 Unidata universities cooperate to acquire real-time, global, atmospheric & oceanic observations, model outputs, remotely sensed images, etc. This is possible through coordinated community effort.

LDM-6 Modernization

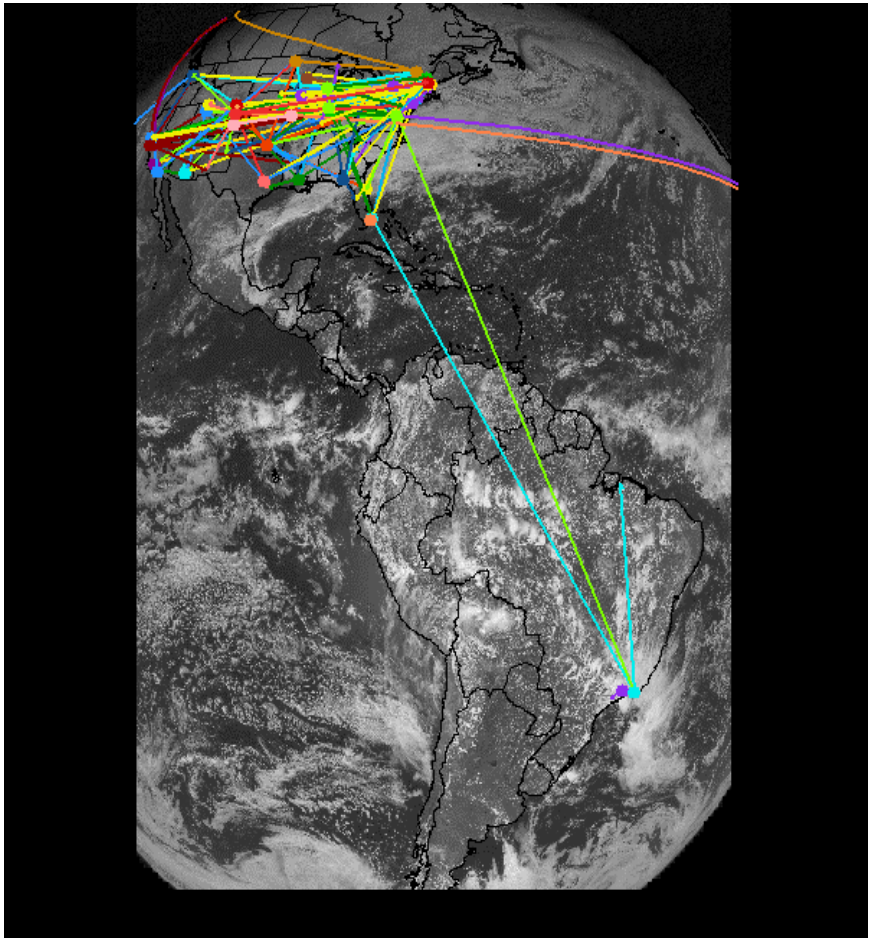




- Use TCP guaranteed delivery instead of RPCs
- User-selectable product “chunking”
- Code cleanup for greater efficiency
- Evolution of real-time statistics gathering and display

IDD-Brazil Connects to Unidata IDD

- Current Participants
  - NSF/ATM
  - University of Miami
  - Unidata Program Center
  - UFRJ
  - UFPA
  - CPTEC/INPE
  - USP
- Infrastructure
  - Internet2
  - AMPATH (NSF)
    - FIU
    - Global Crossing
  - RNP
  - ANSP



MeteoForum - Initial Successes

- Establish data distribution network linking Unidata IDD with research and educational institutions in Brazil - *IDD-Brazil*
- Fund translation of select COMET training modules into Spanish (Costa Rica and Argentina)
- Install Unidata-developed NOAAPORT reception system and high-end application workstation at Universidad de Costa Rica

International Partnerships

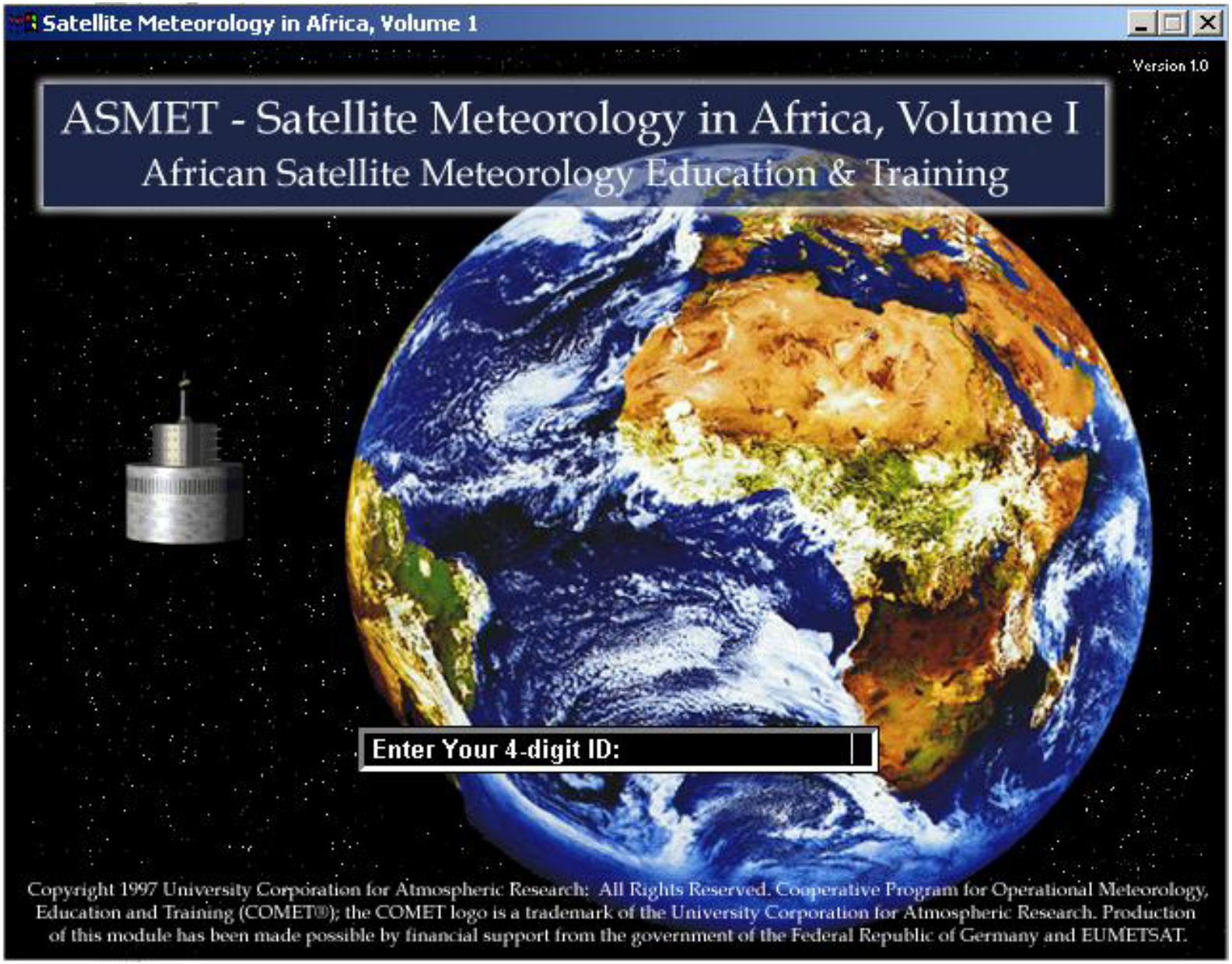
- Meteorological Service of Canada
  - COMET sponsor
- Australian Bureau of Meteorology
  - Aviation program
  - Module development assistance
- EUMETSAT
  - Joint development for polar orbiting satellites
- EUMETCAL
  - Joint development (*Polar Lows*)
- World Meteorological Organization
  - Travel for WMO participation in MeteoForum
  - Distribution of COMET materials worldwide

Summary

- International outreach activities fall into four categories
  - Information
  - Utility
  - Applications
  - Dissemination and training
- Combined, these activities serve to stimulate and expand the use of space based remote sensing worldwide

Cooperative Program for Operational Meteorology, Education and Training
Forecaster's Multimedia Library
Version 1.0
Línea de fricción externa
Línea de fricción interna
Ojo
Capa superior
Tierra
Zona de viento débil
Tierra
Perfil de presión sinóptico en sup.
Perfil de presión en sup. modificado por la mesoescala
Meteorología Satelital:
Casos de Estudio
Con los Datos del Sensor de Radiación del GOES
Escriba una clave de 4 dígitos:
© Copyright 2001 University Corporation for Atmospheric Research: Reservados todos los derechos. Cooperative Program for Operational Meteorology, Education and Training (COMET®); el logotipo de COMET es una marca registrada de University Corporation for Atmospheric Research.

Back


Satellite Meteorology in Africa, Volume 1
Version 1.0
ASMET - Satellite Meteorology in Africa, Volume I
African Satellite Meteorology Education & Training
Enter Your 4-digit ID:
Copyright 1997 University Corporation for Atmospheric Research: All Rights Reserved. Cooperative Program for Operational Meteorology, Education and Training (COMET®); the COMET logo is a trademark of the University Corporation for Atmospheric Research. Production of this module has been made possible by financial support from the government of the Federal Republic of Germany and EUMETSAT.

Back